Release notes for ENDF/B Development n-054_Xe_132 evaluation

April 26, 2017

- **checkr** Warnings:

    1. A previous error halted parsing of the current section
       MAT=5449, MF= 1, MT=451 (1): Parsing stopped

    ```
    ERROR(S) FOUND IN MAT=5449, MF= 1, MT=451
       SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER     122 TO     186
    ```

- **checkr** Errors:

    1. A variable is outside the allowed ENDF range
       MAT=5449, MF= 1, MT=451 (0): Variable range

    ```
    ERROR(S) FOUND IN MAT=5449, MF= 1, MT=451
       MOD =     1 OUT OF RANGE     0 -     0           RECORD NUMBER     122
    ```

    2. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=5449, MF= 2, MT=151 (0): Directory (b)

    ```
    ERROR(S) FOUND IN MAT=5449, MF= 2, MT=151
       SECTION  2/151 NOT IN DIRECTORY               RECORD NUMBER     188
    ```

    3. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=5449, MF= 3, MT= 1 (0): Directory (b)

    ```
    ERROR(S) FOUND IN MAT=5449, MF= 3, MT=  1
       SECTION  3/  1 NOT IN DIRECTORY               RECORD NUMBER     292
    ```

    4. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=5449, MF= 3, MT= 2 (0): Directory (b)

    ```
    ERROR(S) FOUND IN MAT=5449, MF= 3, MT=  2
       SECTION  3/  2 NOT IN DIRECTORY               RECORD NUMBER     323
    ```

    5. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=5449, MF= 3, MT= 4 (0): Directory (b)

    ```
    ERROR(S) FOUND IN MAT=5449, MF= 3, MT=  4
       SECTION  3/  4 NOT IN DIRECTORY               RECORD NUMBER     354
    ```

    6. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=5449, MF= 3, MT= 16 (0): Directory (b)

    ```
    ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 16
       SECTION  3/ 16 NOT IN DIRECTORY               RECORD NUMBER     382
    ```

    7. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=5449, MF= 3, MT= 17 (0): Directory (b)

1

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 17
    SECTION  3/ 17 NOT IN DIRECTORY                RECORD NUMBER     396
```

8. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=5449, MF= 3, MT= 22 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 22
    SECTION  3/ 22 NOT IN DIRECTORY                RECORD NUMBER     404
```

9. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=5449, MF= 3, MT= 28 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 28
    SECTION  3/ 28 NOT IN DIRECTORY                RECORD NUMBER     415
```

10. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 51 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 51
    SECTION  3/ 51 NOT IN DIRECTORY                RECORD NUMBER     426
```

11. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 52 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 52
    SECTION  3/ 52 NOT IN DIRECTORY                RECORD NUMBER     454
```

12. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 53 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 53
    SECTION  3/ 53 NOT IN DIRECTORY                RECORD NUMBER     480
```

13. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 54 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 54
    SECTION  3/ 54 NOT IN DIRECTORY                RECORD NUMBER     506
```

14. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 55 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 55
    SECTION  3/ 55 NOT IN DIRECTORY                RECORD NUMBER     531
```

15. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 56 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 56
            SECTION  3/ 56 NOT IN DIRECTORY                  RECORD NUMBER      556
```

16. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 57 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 57
            SECTION  3/ 57 NOT IN DIRECTORY                  RECORD NUMBER      580
```

17. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 58 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 58
            SECTION  3/ 58 NOT IN DIRECTORY                  RECORD NUMBER      604
```

18. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 59 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 59
            SECTION  3/ 59 NOT IN DIRECTORY                  RECORD NUMBER      628
```

19. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 60 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 60
            SECTION  3/ 60 NOT IN DIRECTORY                  RECORD NUMBER      651
```

20. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 61 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 61
            SECTION  3/ 61 NOT IN DIRECTORY                  RECORD NUMBER      674
```

21. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 62 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 62
            SECTION  3/ 62 NOT IN DIRECTORY                  RECORD NUMBER      697
```

22. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 63 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 63
            SECTION  3/ 63 NOT IN DIRECTORY                  RECORD NUMBER      719
```

23. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 64 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 64
    SECTION  3/ 64 NOT IN DIRECTORY                RECORD NUMBER    741
```

24. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 65 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 65
    SECTION  3/ 65 NOT IN DIRECTORY                RECORD NUMBER    763
```

25. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 66 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 66
    SECTION  3/ 66 NOT IN DIRECTORY                RECORD NUMBER    784
```

26. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 67 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 67
    SECTION  3/ 67 NOT IN DIRECTORY                RECORD NUMBER    805
```

27. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT= 91 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT= 91
    SECTION  3/ 91 NOT IN DIRECTORY                RECORD NUMBER    826
```

28. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT=102 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT=102
    SECTION  3/102 NOT IN DIRECTORY                RECORD NUMBER    847
```

29. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT=103 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT=103
    SECTION  3/103 NOT IN DIRECTORY                RECORD NUMBER    878
```

30. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT=104 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 3, MT=104
    SECTION  3/104 NOT IN DIRECTORY                RECORD NUMBER    895
```

31. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT=105 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=5449, MF= 3, MT=105
        SECTION  3/105 NOT IN DIRECTORY                    RECORD NUMBER     907
```

32. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 3, MT=107 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=5449, MF= 3, MT=107
        SECTION  3/107 NOT IN DIRECTORY                    RECORD NUMBER     917
```

33. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 2 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=5449, MF= 4, MT=  2
        SECTION  4/  2 NOT IN DIRECTORY                    RECORD NUMBER     934
```

34. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 16 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 16
        SECTION  4/ 16 NOT IN DIRECTORY                    RECORD NUMBER    1280
```

35. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 17 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 17
        SECTION  4/ 17 NOT IN DIRECTORY                    RECORD NUMBER    1325
```

36. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 22 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 22
        SECTION  4/ 22 NOT IN DIRECTORY                    RECORD NUMBER    1348
```

37. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 28 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 28
        SECTION  4/ 28 NOT IN DIRECTORY                    RECORD NUMBER    1381
```

38. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 51 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 51
        SECTION  4/ 51 NOT IN DIRECTORY                    RECORD NUMBER    1414
```

39. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 52 (0): Directory (b)

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```
        ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 52
           SECTION  4/ 52 NOT IN DIRECTORY                RECORD NUMBER    1656
```

40. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 53 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 53
           SECTION  4/ 53 NOT IN DIRECTORY                RECORD NUMBER    1880
```

41. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 54 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 54
           SECTION  4/ 54 NOT IN DIRECTORY                RECORD NUMBER    1973
```

42. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 55 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 55
           SECTION  4/ 55 NOT IN DIRECTORY                RECORD NUMBER    2190
```

43. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 56 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 56
           SECTION  4/ 56 NOT IN DIRECTORY                RECORD NUMBER    2279
```

44. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 57 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 57
           SECTION  4/ 57 NOT IN DIRECTORY                RECORD NUMBER    2486
```

45. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 58 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 58
           SECTION  4/ 58 NOT IN DIRECTORY                RECORD NUMBER    2571
```

46. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 59 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 59
           SECTION  4/ 59 NOT IN DIRECTORY                RECORD NUMBER    2654
```

47. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 60 (0): Directory (b)

6

```
ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 60
    SECTION  4/ 60 NOT IN DIRECTORY              RECORD NUMBER    2735
```

48. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 61 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 61
    SECTION  4/ 61 NOT IN DIRECTORY              RECORD NUMBER    2814
```

49. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 62 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 62
    SECTION  4/ 62 NOT IN DIRECTORY              RECORD NUMBER    2891
```

50. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 63 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 63
    SECTION  4/ 63 NOT IN DIRECTORY              RECORD NUMBER    2966
```

51. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 64 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 64
    SECTION  4/ 64 NOT IN DIRECTORY              RECORD NUMBER    3039
```

52. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 65 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 65
    SECTION  4/ 65 NOT IN DIRECTORY              RECORD NUMBER    3110
```

53. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 66 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 66
    SECTION  4/ 66 NOT IN DIRECTORY              RECORD NUMBER    3179
```

54. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 67 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 67
    SECTION  4/ 67 NOT IN DIRECTORY              RECORD NUMBER    3246
```

55. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 4, MT= 91 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5449, MF= 4, MT= 91
         SECTION  4/ 91 NOT IN DIRECTORY                RECORD NUMBER    3311
```

56. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 5, MT= 16 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5449, MF= 5, MT= 16
         SECTION  5/ 16 NOT IN DIRECTORY                RECORD NUMBER    3377
```

57. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 5, MT= 17 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5449, MF= 5, MT= 17
         SECTION  5/ 17 NOT IN DIRECTORY                RECORD NUMBER    3577
```

58. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 5, MT= 22 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5449, MF= 5, MT= 22
         SECTION  5/ 22 NOT IN DIRECTORY                RECORD NUMBER    3667
```

59. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 5, MT= 28 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5449, MF= 5, MT= 28
         SECTION  5/ 28 NOT IN DIRECTORY                RECORD NUMBER    3800
```

60. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF= 5, MT= 91 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5449, MF= 5, MT= 91
         SECTION  5/ 91 NOT IN DIRECTORY                RECORD NUMBER    3933
```

61. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF=33, MT= 2 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5449, MF=33, MT=  2
         SECTION 33/  2 NOT IN DIRECTORY                RECORD NUMBER    4221
```

62. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF=33, MT= 4 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5449, MF=33, MT=  4
         SECTION 33/  4 NOT IN DIRECTORY                RECORD NUMBER    4311
```

63. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5449, MF=33, MT= 16 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5449, MF=33, MT= 16
         SECTION 33/ 16 NOT IN DIRECTORY                    RECORD NUMBER    4358
```

64. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5449, MF=33, MT=102 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5449, MF=33, MT=102
         SECTION 33/102 NOT IN DIRECTORY                    RECORD NUMBER    4368
```

- `groupie` Errors:

    1. Very small elastic cross section found
    0: Small elastic

    ```
    Multi-Group and Multi-Band Parameters from ENDF/B Data (GROUPIE 2015-2)
    ----------------------------------------------------------------------
    ENDF/B Input and Output Data Filenames
    ENDFB.IN
    ENDFB.OUT
    ... [97 more lines]
    ```

- `fudge-4.0` Warnings:

    1. Missing a channel with a particular angular momenta combination
    resonances / resolved / MultiLevel_BreitWigner (Error # 0): missingResonanceChannel

    ```
    WARNING: Missing a channel with angular momenta combination L = 0, J = 1.5 and S = 1.5 for "capture"
    ```

    2. Potential scattering hasn't converged, you need more L's!
    resonances / resolved (Error # 1): potentialScatteringNotConverged

    ```
    WARNING: Potential scattering hasn't converged by L=0 at E=4000.0 eV, xs[0]/xs[0]=100.0% > 0.1%
    ```

    3. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
    Section 0 (n + Xe132): / Form 'eval': / Component 0 (Error # 0): Condition num.

    ```
    WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
    ```

    4. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
    Section 0 (n + Xe132): / Form 'eval': / Component 1 (Error # 0): Condition num.

    ```
    WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
    ```

    5. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
    Section 1 ((z,n)): / Form 'eval': (Error # 0): Condition num.

    ```
    WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
    ```

    6. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
    Section 2 (n[multiplicity:'2'] + Xe131): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

7. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 3 (Xe133 + gamma): / Form 'eval': / Component 0 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

8. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 3 (Xe133 + gamma): / Form 'eval': / Component 1 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

- `fudge-4.0` Errors:

    1. Calculated and tabulated Q values disagree.
    reaction label 19: n[multiplicity:'2'] + Xe131 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: -9907600.222702026 eV vs -8.9346e6 eV!
    ```

    2. Calculated and tabulated Q values disagree.
    reaction label 20: n[multiplicity:'3'] + Xe130 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: -16512415.34182739 eV vs -1.5554e7 eV!
    ```

    3. Calculated and tabulated Q values disagree.
    reaction label 21: n + H1 + I131 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: -10096100.45991516 eV vs -9.1239e6 eV!
    ```

    4. Calculated and tabulated Q values disagree.
    reaction label 22: Xe133 + gamma (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 5463422.227462769 eV vs 6.4383e6 eV!
    ```

    5. Calculated and tabulated Q values disagree.
    reaction label 23: n + He4 + Te128 (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: -3684318.684494019 eV vs -2.7248e6 eV!
    ```

    6. Calculated and tabulated Q values disagree.
    reaction label 24: H1 + I132_s (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: -3769258.999832153 eV vs -2.7946e6 eV!
    ```

    7. Calculated and tabulated Q values disagree.
    reaction label 25: H2 + I131_s (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: -7871534.358978271 eV vs -6.8993e6 eV!
    ```

    8. Calculated and tabulated Q values disagree.
    reaction label 26: H3 + I130_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -10197603.37284851 eV vs -9.2732e6 eV!
```

9. Calculated and tabulated Q values disagree.
   reaction label 27: He4 + Te129_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 2398089.422729492 eV vs 3.3605e6 eV!
```

- njoy2012 Warnings:

  1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

     ```
      ---message from conver---cannot do complete particle production for mt= 16
                            only mf4/mf5 provided
     ```

  2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

     ```
      ---message from conver---cannot do complete particle production for mt= 17
                            only mf4/mf5 provided
     ```

  3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

     ```
      ---message from conver---cannot do complete particle production for mt= 22
                            only mf4/mf5 provided
     ```

  4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

     ```
      ---message from conver---cannot do complete particle production for mt= 28
                            only mf4/mf5 provided
     ```

  5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)

     ```
      ---message from conver---cannot do complete particle production for mt= 91
                            only mf4/mf5 provided
     ```

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